

Jordan Valley
Authority

Business Process
Mapping: Workshop
Process Cycle

Financial Accounting
System Program

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OSC Member
FAS Team Member



FORWARD

Collaborative Approaches for Resolving Water Issues



Business Process Mapping Reports

- General Process Mapping
- Expenditure Business Cycle
- Inventory and Fixed Assets Business Cycle
- Revenue Business Cycle
- Budget and Accounting Business Cycle
- ✓ **Workshop Business Cycle**
- Payroll and Personnel Cycle



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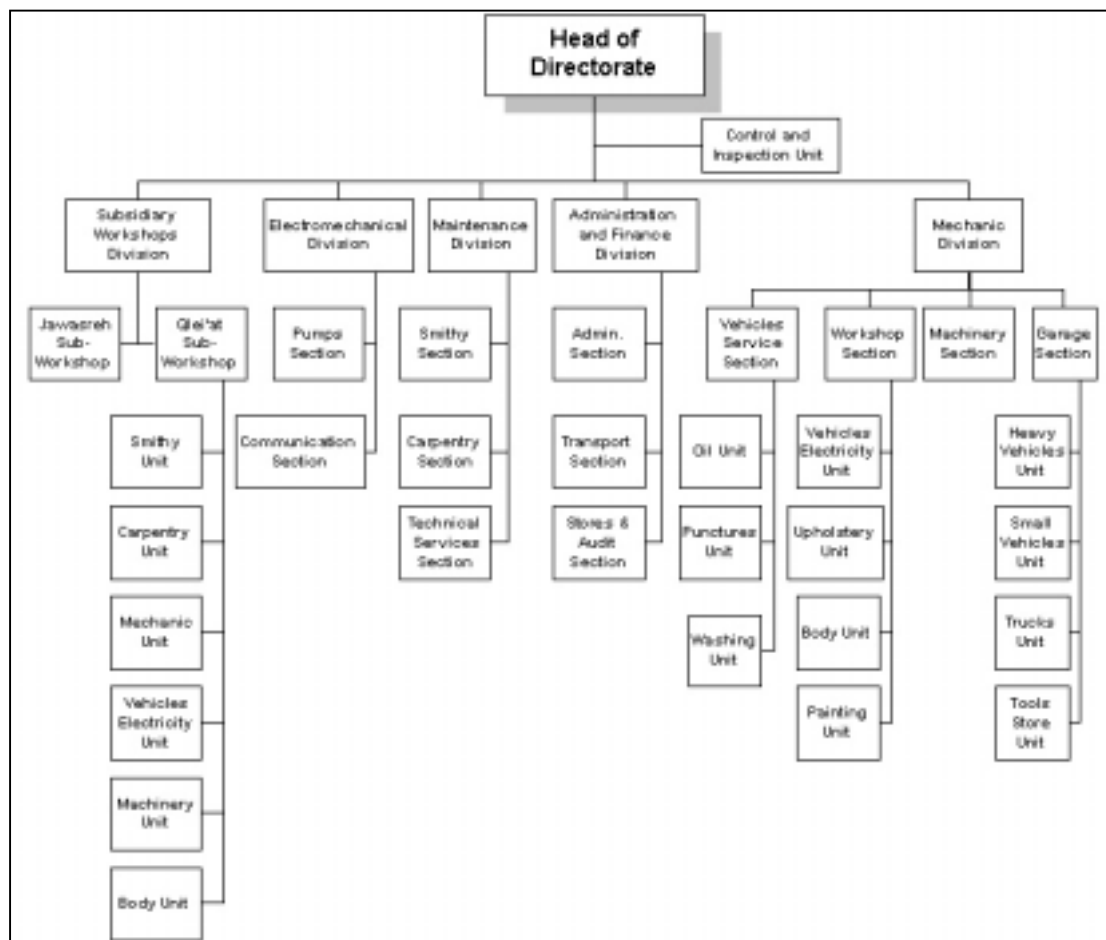
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CHAPTER 1 OVERVIEW

The Jordan Valley Authority (JVA) has two workshops in the Jordan River Valley: the central workshop, which is located near Deir Alla; and the Southern Ghors Wadi Araba (SGWA) Workshop in Ghor Al-Safi. The central workshop, which is called Al-Fanoush, is one of the five directorates of North and Middle Ghors Governate. It provides repair and maintenance services to the whole of the JVA. The central workshop was established in 1984 by GTZ. It also operates and controls two subsidiary workshops: Al-Qlei'at in the Northern Directorate and Al-Jawasreh in the Southern Directorate. These two workshops perform routine maintenance and simple repairs on vehicles and machinery in both directorates. Of the two, the SGWA workshop was established more recently. Due to its location, it provides repairs and maintenance services for the SGWA Governate only. As it does not have the capacity to perform all kinds of repairs, Al-Fanoush provides most repair and maintenance services for the JVA since it is better equipped and nearer to other JVA directorates and sites.

Figure 1.1 illustrates the organizational structure of Al-Fanoush.

**Figure 1.1
Central Workshop Organizational Structure**



CHAPTER 2

SCOPE OF WORK

As previously mentioned, the scope of work in the shops includes all kinds of repair and maintenance jobs including the following:

- Heavy machinery
- Trucks and small vehicles
- Water pumps
- Communication equipment
- General work such as carpentry and painting
- Assembly of some small items such as pipes, doors and water tanks.

Neither of the two workshops performs minor repairs.

CHAPTER 3

INVENTORY AND STORES

The central workshop has two stores: spare parts and general items. The spare parts store receives and stores spare parts for different types of vehicles and machinery, as well as providing the central workshop and the two subsidiary workshops in the Northern and the Southern Directorates with needed supplies. The staff consists of a storekeeper, a store clerk, and workers. The store clerk maintains store records in the form of a card for each item that indicates the code, description, unit price, location, quantity in, quantity out, reference and balance. These records are referred to as the “Kardex” records. The manufacturer’s part number is used for spare part coding and reference. The SGWA workshop receives spare parts from the SGWA Governate store. The Kardex system is used for all items.

The general items store handles supplies other than spare parts such as construction materials, stationery, tools and fixed assets. This store maintains its records in the form of ledgers that contain the same information as the Kardex records. Items in the store are not coded but instead are referred to by description only.

The central workshop controls the subsidiary stores and handles administrative issues while the Supplies Directorate controls technical matters. Items are received as inventory and are issued through receiving and issuing vouchers prepared by the storekeeper as per General Supplies Department instructions. Those procedures are described in the report titled “Business Process Mapping: Inventory and Fixed Assets Cycle.”

CHAPTER 4

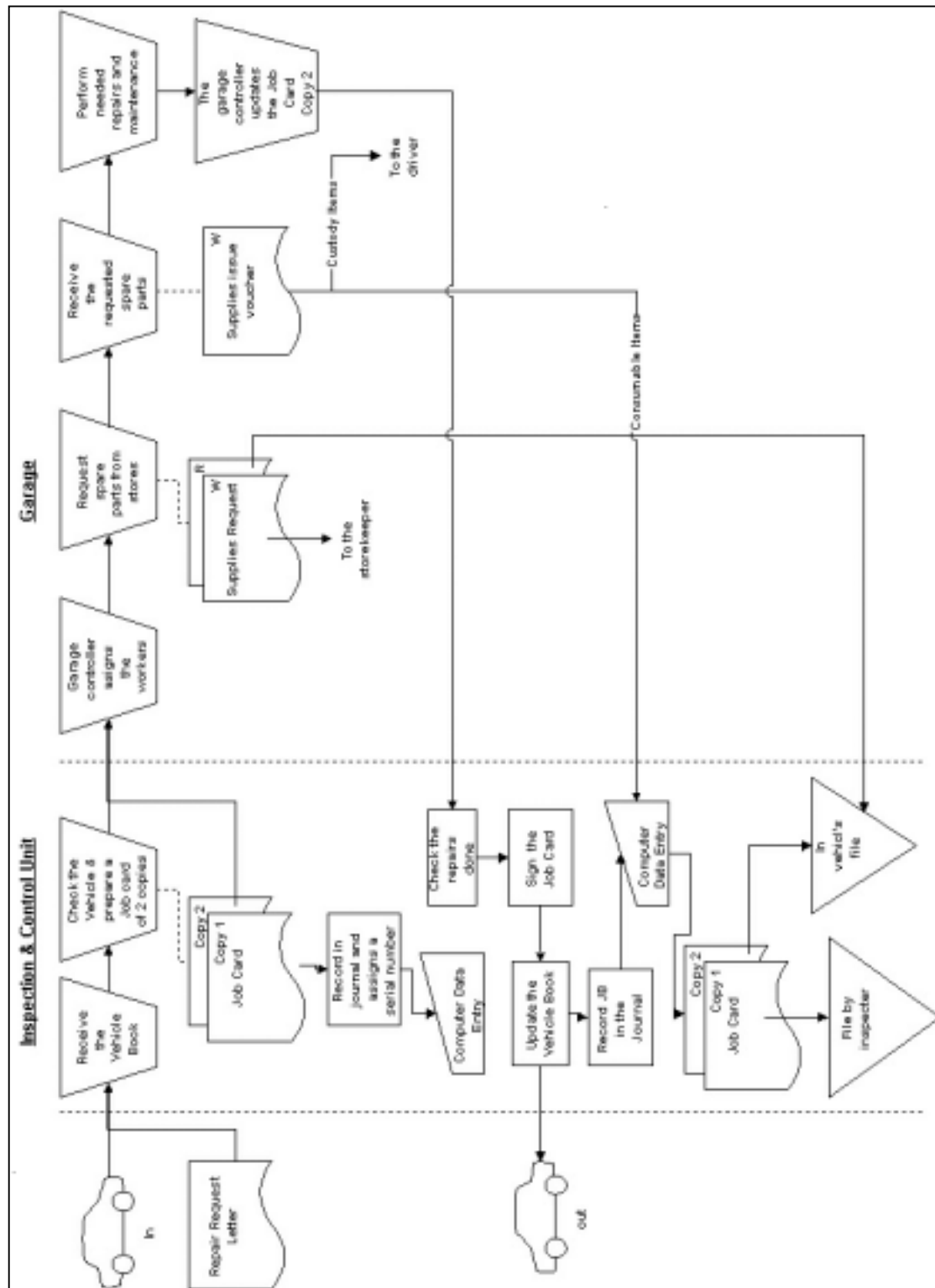
BUSINESS PROCESSES

All JVA vehicles and machinery are monitored and controlled either by the central workshop or by the SGWA workshop. The workshops receive all newly purchased or donated vehicles, check and then deliver them to users or drivers. A receiving voucher and an issue voucher are prepared when receiving or issuing a vehicle. The driver/ user receives the vehicle as a custody item and is held accountable for any damage to the vehicle. The workshops maintain a file for each vehicle that includes a copy of the vehicle license, the issue voucher, and the custodian's name. Maintenance and fuel consumption are reported monthly by each directorate and are filed in the vehicle file.

Each vehicle has a corresponding "vehicle book." The book contains daily trips, mileage, fuel and oil consumption, and maintenance expenses. The driver is responsible for updating the book on a daily basis. The transportation section at each directorate collects and replaces these books monthly and sends reports to the workshop stating monthly costs as derived from the vehicle book.

A job card is assigned when repairs are initiated. Figure 4.1 illustrates the workflow of the maintenance process.

Figure 4.1
Vehicle Maintenance Process



- The vehicle is received at the workshop with a “repair request letter” from the directorate indicating the repairs to be performed.
- The inspector at the inspection section checks the vehicle, confirms the needed repairs, and prepares two copies of a job card. The inspector keeps the vehicle book at the inspection section.
- The inspector assigns a serial number to the job card and records it in a journal that he maintains. He also enters it on the computer.
- The inspector keeps the first copy of the job card and sends the other copy with the vehicle to the garage to perform the needed repairs.
- The controller at the garage assigns the job to the appropriate workers.
- If spare parts are needed for the job, the worker prepares a “supplies request form” (two copies: white and red), has it signed by the controller and head of section, then obtains the parts from the store. The white copy of the request is kept by the storekeeper and the red copy is attached to the job card.
- If the requested spare parts are not available in the store, the worker prepares a “purchase request,” gets it approved, and processes it as an expenditure.
- The worker receives the spare parts through a “supplies issue voucher.” If the received parts are custody items (i.e., those with a usable life of more than one year), such as wheels or batteries, the white copy of the voucher is given to the vehicle driver. If they are consumable items, then the white copy is attached to the job card.
- After completing the required repairs, the garage controller updates his copy of the job card stating the parts used, their value, and the number of working hours spent.
- The vehicle is returned with the job card to the inspector who checks the repairs. He signs the card and updates the vehicle book listing the repairs done and their cost, including labor. The inspector also closes out the job on the computer and in the journal that he maintains.
- The inspector files the first copy (white copy) of the job card by number. The control section files the other copy (red copy) in the vehicle file.

Off-site repair and maintenance jobs are performed in the same manner. A job card is prepared, recorded, and filed by the responsible section. The electromechanical division, for example, maintains files for all job cards related to pumps and communication equipment repairs.

The Al-Qlei’at and Al-Jawasreh shops also fill out job cards, but they are kept on the premises and are not sent to the central workshop. The subsidiary shops receive spare parts from the central workshop store. Such parts are considered to be in the custody of the receiver until used and reported.

The workshop of the SGWA uses the same processing procedures. A job card is also prepared for each job, recorded and filed at the control section. This workshop maintains all its records manually.

At the end of each month, the different garage sections send reports to the control section on the jobs performed. The control section prepares monthly reports which state the number of jobs performed by each section, their costs, and their allocation to JVA directorates. They also include an efficiency analysis.

The cost of services rendered to each directorate is calculated and reported monthly but is not charged to them. The central workshop prepares four copies of the monthly report. One copy goes to the head of the directorate, one to the Assistant Secretary General (ASG) in the Northern and Middle Ghors, a copy is sent to the Secretary General of the JVA, and one is kept at the control section in the central workshop.

The central workshop also provides maintenance services to outside parties such as the army, other ministries and other government agencies. The costs of such jobs are reported individually to headquarters for follow up but are not invoiced or collected. Such jobs are minor and do not require spare parts.

CHAPTER 5 COMPUTER USE

The central workshop at Al-Fanoush operates a computerized system for inventory control and job costing. The system also tracks workshop productivity and efficiency and is tailored to serve directorate needs and procedures. On the client side (PC), the system is supported by a Windows environment, using Developer 2000, whereas the server side is supported by Oracle 7 RDBMS running on a SUN Solaris 2.6 machine. The system has an Arabic interface and reflects the documents on hand used by the JVA. At present, the system is restricted to follow up work. Manual records are still used.

Based on discussions with JVA staff at the central workshop control section, we have concluded the following about the system:

- The application design is limited to central workshop needs.
- The application cannot be used in other storerooms since modifications are required.
- The level of effort required to carry out such modifications cannot be assessed unless we install the application on our machines and match it with our findings and needed functions.
- JVA staff at the control section would prefer to have a new, ready-made application instead of the one they are currently using, provided that the new application can accommodate JVA rules and procedures. The current application lacks security controls and a good segregation of duties. The main server (i.e. SUN-SPARC 20) has no free space and therefore cannot accommodate future needs.

CHAPTER 6

RECOMMENDATION FOR MANAGEMENT

As the subsidiary workshops in the Northern and Southern Directorates do not send their job cards to the central workshop, jobs completed there are not entered into the computer system. We recommend that such job cards be sent weekly to the central workshop to be recorded and filed electronically.